

**EPA Superfund  
Record of Decision:**

**MATTIACE PETROCHEMICAL CO., INC.  
EPA ID: NYD000512459  
OU 02  
GLEN COVE, NY  
09/27/1990**

09/27/90  
REGIONAL ADMINISTRATOR

**#SNLD**

**SITE NAME, LOCATION, AND DESCRIPTION**

THE MATTIACE PETROCHEMICAL CO., INC. SITE (THE "SITE"), WHICH INCLUDES THE 2.5 ACRE PROPERTY OWNED BY MATTIACE PETROCHEMICAL CO., INC., IS LOCATED ON GARVEY'S POINT ROAD IN GLEN COVE ON LONG ISLAND, NEW YORK (FIGURE 1). LIMCO MANUFACTURING CORPORATION, A PRECISION SHEET METAL MANUFACTURER, IS LOCATED ALONG THE EASTERN AND SOUTHERN BORDER OF THE MATTIACE PROPERTY. PROPERTY FORMERLY OWNED BY EDMOS, A KNITTING, DYING, AND FINISHING TEXTILE FABRIC MANUFACTURER, BORDERS THE MATTIACE PROPERTY TO THE WEST. THIS PROPERTY IS PRESENTLY OWNED BY TWENTY GARVEY'S POINT ROAD DEVELOPERS AND IS OCCUPIED BY MEDALLION OIL CO. AND VARIOUS OTHER TENANTS. UNDEVELOPED PROPERTY OWNED BY THE GLEN COVE DEVELOPMENT CORPORATION IS LOCATED TO THE NORTH OF THE MATTIACE PROPERTY. A RESIDENTIAL AREA IS LOCATED JUST NORTH OF THIS UNDEVELOPED AREA, WITHIN ONE HUNDRED YARDS OF THE MATTIACE PROPERTY.

THE MATTIACE SITE STUDY AREA ALSO CONTAINS THE GARVEY'S POINT PRESERVE, THE GLEN COVE MARINA, RESIDENTIAL AREAS, AND OTHER INDUSTRIAL FACILITIES IN ADDITION TO THOSE MENTIONED ABOVE. SEVERAL OF THE INDUSTRIAL PROPERTIES IN THE AREA ARE PRESENTLY BEING INVESTIGATED OR ARE POTENTIAL CANDIDATES FOR INVESTIGATION UNDER STATE AND FEDERAL HAZARDOUS WASTE LAWS.

THE MATTIACE PROPERTY (FIGURE 2) IS ELEVATED ABOVE THE SURROUNDING PROPERTIES WITH THE EXCEPTION OF THE NORTHERN BORDERING PROPERTY. THE STRUCTURES ON THE MATTIACE SITE INCLUDE A METAL QUONSET TYPE BUILDING, A CONCRETE FIRE SHED, AND A CONCRETE LOADING DOCK PARTIALLY COVERED BY A SLANTED METAL ROOF. AN UNDERGROUND TANK FARM USED FOR THE STORAGE OF ORGANIC SOLVENTS IS LOCATED IN THE NORTHEAST PORTION OF THE SITE. UNDERGROUND TANKS ARE ALSO LOCATED BENEATH THE CONCRETE LOADING PLATFORMS AND ADJACENT TO THESE PLATFORMS.

THE REGIONAL GEOLOGY IN THE MATTIACE STUDY AREA IS GENERALLY COMPRISED OF 3 UNCONSOLIDATED SEDIMENTS, NAMELY, THE RARITAN FORMATION, THE MAGOTHY FORMATION AND THE UPPER GLACIAL FORMATION. THE MATTIACE SITE IS UNDERLAIN BY UNCONSOLIDATED DEPOSITS OF THE UPPER GLACIAL AND MAGOTHY FORMATIONS, UNDER WHICH LAYS THE RARITAN CLAY, WHICH IS A MINIMUM OF 50 FEET THICK AT THE SITE. THE CLAY IS OF VERY UNIFORM COMPOSITION LOCALLY AND IS RAISED ALONG A SOUTHWEST TO NORTHEAST AXIS ACROSS THE SITE, CREATING A LOCALIZED GROUNDWATER DIVIDE BENEATH THE SITE. GROUNDWATER SOUTH OF THE DIVIDE FLOWS TOWARD GLEN COVE CREEK, AND GROUNDWATER NORTH OF THE DIVIDE FLOWS TOWARD HEMPSTEAD HARBOR.

GROUNDWATER IS A SOURCE OF DRINKING WATER FOR AN ESTIMATED 44,000 PEOPLE IN THE AREA, ALTHOUGH THERE IS PRESENTLY NO INDICATION THAT ANY WATER SUPPLIES ARE CONTAMINATED OR IN DANGER OF CONTAMINATION AS A RESULT OF THE MATTIACE SITE. THIS IS BECAUSE GROUNDWATER CONTAMINATION FROM THE MATTIACE SITE MOVES TOWARD HEMPSTEAD HARBOR AND, TO A LESSER EXTENT, GLEN COVE CREEK, WITH NO INTERVENING PUBLIC WATER SUPPLY WELLS. THE GROUNDWATER CONTAMINATION IS ALSO THOUGHT TO BE RESTRICTED TO THE UPPER GLACIAL DEPOSITS ABOVE THE RARITAN CLAY, WHICH IMPLIES THAT CONTAMINATED GROUNDWATER WILL DISCHARGE TO SURFACE WATER, I.E. THE HARBOR OR THE CREEK, AND NOT TRAVEL BENEATH THE HARBOR OR THE CREEK.

**#SHEA**

**SITE HISTORY AND ENFORCEMENT ACTIVITIES**

MATTIACE BEGAN OPERATING IN THE MID-1960'S, RECEIVING CHEMICALS BY TANK TRUCK AND REDISTRIBUTING THEM TO ITS CUSTOMERS. THE PRIMARY OPERATIONS WERE THE STORING, BLENDING, AND REPACKAGING OF ORGANIC SOLVENTS. THESE SOLVENTS WERE STORED IN ABOVE-GROUND AND BELOW-GROUND TANKS AND THEY WERE BLENDED AND REPACKAGED IN 55 GALLON DRUMS UNDER A COVERED SECTION OF THE CONCRETE LOADING DOCK LOCATED IN THE NORTHEAST CORNER OF THE PROPERTY. THE 55 GALLON DRUMS WERE STACKED AND TEMPORARILY STORED ON THE LOADING DOCK PRIOR TO SHIPMENT TO VARIOUS BUYERS.

THE METAL QUONSET HUT LOCATED IN THE WESTERN PORTION OF THE PROPERTY WAS USED BY THE M AND M DRUM CLEANING OPERATION TO CLEAN, PRESSURE TEST, AND REPAINT DRUMS. THE M AND M OPERATION AND THE MATTIACE OPERATION WERE BOTH OWNED BY MATTIACE INDUSTRIES. THE RESULTING AQUEOUS/SOLVENT MIXTURE WAS COLLECTED IN A WETWELL IN THE SOUTHEAST EXTERNAL CORNER OF THE QUONSET HUT. THE LIQUIDS IN THIS WETWELL WERE PERIODICALLY DISCHARGED TO

ONE OF THE ADJACENT ABOVE-GROUND TANKS OR INTO A LEACHING POOL ON THE PROPERTY.

AN UNDERGROUND TANK FARM USED FOR THE STORAGE OF ORGANIC SOLVENTS IS LOCATED IN THE NORTHEAST CORNER OF THE PROPERTY. THIRTY TWO UNDERGROUND AND TWENTY FOUR ABOVEGROUND STORAGE TANKS EXIST MAINLY ON THE NORTHEASTERN SECTION OF THE MATTIACE PROPERTY. THE UNDERGROUND TANKS ARE INTERCONNECTED BY A SPILL PREVENTION SYSTEM. EXCESS MATERIAL FROM OVERFILLED TANKS DRAIN THROUGH A SERIES OF FOUR CONCRETE MANHOLES AND DISCHARGE INTO THE SOLVENT/STORMWATER SEPARATOR WHICH IS LOCATED IN THE SOUTHEAST CORNER OF THE PROPERTY. THIS SPILL PREVENTION SYSTEM ALSO ACTS AS A STORMWATER COLLECTION SYSTEM. STORMWATER FROM THE LOWER PORTION OF THE SEPARATOR WAS INTENDED TO BE DRAINED BY GRAVITY AND THEN PUMPED INTO THE NORTHWEST LEACH POOLS. HOWEVER, THERE IS EVIDENCE THAT THE LIQUIDS COLLECTED IN THE SEPARATOR AND PONDED IN THE SOUTHEAST CORNER OF THE PROPERTY WERE OFTEN PUMPED THROUGH A HOSE DOWN THE MATTIACE DRIVEWAY WHILE THE FACILITY WAS OPERATIONAL.

IN 1986, MATTIACE FILED FOR BANKRUPTCY AS A RESULT OF LEGAL PROBLEMS RESULTING FROM ITS NON-COMPLIANCE WITH VARIOUS ENVIRONMENTAL REGULATIONS. AT THE REQUEST OF THE STATE OF NEW YORK, THE BANKRUPTCY COURT REMOVED THE PROTECTION OF ASSETS NORMALLY EXTENDED TO A REORGANIZING COMPANY IN 1987 IN ORDER TO ENSURE THAT MATTIACE CEASED OPERATIONS. MEANWHILE, IN AUGUST 1986, A GRAND JURY HANDED UP A 21 COUNT CHARGE AGAINST THE COMPANY AND THREE OF ITS OFFICERS. IN MAY 1988, A JURY RETURNED FELONY CHARGES AGAINST THE COMPANY AND ITS PRESIDENT. ON JULY 8, 1988, AN EPA LETTER WAS SENT TO WILLIAM, OTTO, AND LOUIS MATTIACE WHICH PROVIDED THEM WITH NOTIFICATION OF THEIR STATUS AS POTENTIALLY RESPONSIBLE PARTIES AT THE MATTIACE SITE, AS WELL AS THE OPPORTUNITY TO REMEDIATE THE SITE THROUGH AN EPA CONSENT ORDER. NO GOOD FAITH OFFERS WERE RECEIVED BY EPA IN RESPONSE TO THIS NOTIFICATION. IN AUGUST, 1988, A LIEN WAS PLACED ON THE MATTIACE PROPERTY BY EPA.

TO DATE, ONLY ONE POTENTIALLY RESPONSIBLE PARTY, MATTIACE PETROCHEMICAL CO., HAS BEEN IDENTIFIED.

#### **#HCP**

##### **HIGHLIGHTS OF COMMUNITY PARTICIPATION**

A COMMUNITY RELATIONS PLAN WAS DEVELOPED FOR THIS SITE BY EPA WHICH DESIGNATED THE GLEN COVE PUBLIC LIBRARY AS PUBLIC INFORMATION REPOSITORY. ALL PUBLIC INFORMATION CONCERNING THE SITE, INCLUDING THE SITE ADMINISTRATIVE RECORD FILE, IS PRESENTLY LOCATED AT THIS REPOSITORY.

THE PROPOSED PLAN FOR THIS SECOND OPERABLE UNIT FOCUSED FEASIBILITY STUDY (FFS) WAS MAILED TO THE GLEN COVE PUBLIC LIBRARY (AS THE SITE INFORMATION REPOSITORY) AND TO A MAILING LIST, WHICH INCLUDED STATE AND LOCAL OFFICIALS AND OTHER INTERESTED PARTIES, ON JULY 26, 1990. GENERAL NOTICE OF THE AVAILABILITY OF THE PROPOSED PLAN WAS PLACED IN LONG ISLAND NEWSDAY ON AUGUST 3, 1990 AND THE GLEN COVE PILOT RECORD ON AUGUST 9, 1990 (FIGURES 3 AND 4). AN EPA PRESS RELEASE WAS ALSO ISSUED ON AUGUST 3, 1990. A PUBLIC MEETING WAS HELD ON AUGUST 14, 1990, TO SOLICIT PUBLIC COMMENT ON THE FFS AND PROPOSED PLAN. THE DURATION OF THE PUBLIC COMMENT PERIOD WAS 30 DAYS AND ENDED ON AUGUST 27, 1990.

THE PUBLIC MEETING WAS ATTENDED BY CITY AND STATE OFFICIALS, THE NEWS MEDIA, AND PRIVATE CITIZENRY. CONCERN OVER SITE SECURITY, THE POTENTIAL FOR GROUNDWATER CONTAMINATION OF POTABLE WATER SUPPLIES, AND THE TIMING OF THE PROPOSED REMEDIAL ACTION WERE SOME OF THE ISSUES WHICH WERE RAISED AT THE MEETING. THESE CONCERNS WERE ADDRESSED BY EPA AT THE MEETING, AND IN THE CASE OF SITE SECURITY, ADDITIONAL SECURITY MEASURES HAVE BEEN SUBSEQUENTLY IMPLEMENTED AT THE SITE I.E., UPGRADED LOCKING MECHANISM FOR THE FRONT GATE, REPAIRED VEHICULAR ACCESS RESTRICTING BAR, POSTED SUPERFUND HAZARDOUS WASTE SITE WARNING SIGN, ETC.

#### **#SROU**

##### **SCOPE AND ROLE OF OPERABLE UNIT**

EPA INITIATED A REMOVAL ACTION AT THE SITE IN FEBRUARY, 1988, WHICH INCLUDED WASTE CHARACTERIZATION AND OFF-SITE DISPOSAL OF APPROXIMATELY 100,000 GALLONS OF HAZARDOUS MATERIALS FROM ABOVE-GROUND AND BELOW-GROUND TANKS. THE REMOVAL ACTION WAS COMPLETED IN JUNE, 1988.

AN EPA REMEDIAL INVESTIGATION (RI) OF THE SITE WAS COMMENCED IN OCTOBER, 1989. AT THE PRESENT TIME, ALL FIELDWORK HAS BEEN COMPLETED AND A COMPREHENSIVE RI REPORT WILL BE RELEASED THIS FALL BY EPA PROVIDING DETAILS AS TO THE NATURE AND EXTENT OF CONTAMINATION AT THE MATTIACE SITE.

AS PART OF THE ABOVE-REFERENCED RI, A GEOPHYSICAL SURVEY WAS PERFORMED TO ASSESS, AMONG OTHER THINGS, THE POSSIBILITY THAT HAZARDOUS SUBSTANCES WERE DISPOSED OF THROUGH BURIAL ON-SITE. THIS SURVEY INDICATED THAT SEVERAL AREAS IN AND AROUND THE MATTIACE SITE SHOULD BE FURTHER INVESTIGATED DUE TO THE POSSIBILITY OF BURIED DRUMS OF HAZARDOUS SUBSTANCES. THEREFORE, EPA INITIATED THE SECOND OPERABLE UNIT FFS IN DECEMBER, 1989 TO FURTHER DEFINE THE FINDINGS OF THE GEOPHYSICAL INVESTIGATION.

WITH THE CREATION OF THE SECOND OPERABLE UNIT AT THIS SITE, ALL OTHER ELEMENTS OF THE SITE INVESTIGATION WERE DESIGNATED AS FIRST OPERABLE UNIT ACTIVITIES.

THE SECOND OPERABLE UNIT INVESTIGATION'S OBJECTIVES CONSISTED OF THE IDENTIFICATION OF ANY BURIED DRUMS WHICH CONTAINED HAZARDOUS WASTE, AS WELL AS THE IDENTIFICATION OF SIGNIFICANTLY CONTAMINATED SOILS (AS EVIDENCED BY STAINING AND/OR INSTRUMENT READINGS); THE SAMPLING OF DRUMS, IF POSSIBLE, AND CONTAMINATED SOILS; AND THE CATALOGING OF THE LOCATION AND DEPTH OF DRUMS AND CONTAMINATED SOILS.

THE INVESTIGATION CONSISTED OF TEST TRENCHES AND TEST PITS EXCAVATED AT THREE LOCATIONS-ONE LARGE LOCATION ALONG THE MATTIACE FACILITY'S NORTHWEST PROPERTY BOUNDARY (AREA 1), AND TWO SMALLER LOCATIONS ON THE NEIGHBORING LIMCO PROPERTY (AREAS 2 AND 3).

SIX TEST TRENCHES WERE EXCAVATED IN AREA 1, FOLLOWED BY 4 TEST PITS IN THIS SAME AREA. THREE TEST PITS WERE EXCAVATED IN AREAS 2 AND 3. AN ADDITIONAL (UNPLANNED) TEST PIT WAS ALSO EXCAVATED IN A SUSPICIOUS MOUNDED AREA JUST EAST OF THE MATTIACE FENCE LINE, IN AN UNLABELLED AREA. SEE FIGURE 5 FOR TEST TRENCH AND TEST PIT LOCATIONS. TEST TRENCHES WERE APPROXIMATELY FIVE FEET DEEP, WHILE TEST PITS WERE APPROXIMATELY TWO FEET DEEP.

#### **#SSC**

##### **SUMMARY OF SITE CHARACTERISTICS**

APPROXIMATELY 25 DRUMS AND NUMEROUS BRAKE FLUID CONTAINERS WERE IDENTIFIED AS A RESULT OF THIS INVESTIGATION. THE DRUMS AND CONTAINERS OF HAZARDOUS SUBSTANCES WERE ALL FOUND BURIED ALONG THE MATTIACE FACILITY'S NORTHWEST BOUNDARY, DESIGNATED AS AREA 1. A FEW DRUMS WERE FOUND IN THE LIMCO PROPERTY TEST PITS, BUT THEY WERE EMPTY AND FIELD SCREENING ACTIVITIES INDICATED THAT THEY WERE SURROUNDED BY UNCONTAMINATED SOILS. SAMPLES OF STAINED SOIL AND DRUMMED LIQUIDS IDENTIFIED AT THE MATTIACE PROPERTY WERE SECURED AND ANALYSED. DRUMMED SLUDGES WERE FOUND TO CONTAIN LARGE CONCENTRATIONS OF VOLATILE ORGANIC COMPOUNDS SUCH AS TOLUENE (APPROX. 220,000 PARTS PER MILLION, OR PPM) AND 4-METHYL-2-PENTANONE (APPROX. 160,000 PARTS PER MILLION) AS WELL AS LESSER CONCENTRATIONS OF A VARIETY OF SEMI-VOLATILE COMPOUNDS. CONTAMINATED SOIL SAMPLES CONTAINED HIGH CONCENTRATIONS OF TOLUENE (APPROX. 35,000 PPM), ETHYLBENZENE (APPROX. 1600 PPM), TOTAL XYLENE (APPROX. 7,300 PPM) AND LEAD (APPROX. 4,280 PPM). DETAILED RESULTS ARE PROVIDED IN TABLE 1.

AFTER DOCUMENTATION OF THE NUMBER AND LOCATION OF DRUMS AND CONTAINERS AND THE EXTENT OF STAINED SOILS WAS COMPLETED, THE TEST TRENCHES AND PITS WERE BACKFILLED BY EPA IN THE INTEREST OF PUBLIC SAFETY.

#### **#SSR**

##### **SUMMARY OF SITE RISKS**

THE FIELDWORK THAT WAS CONDUCTED FOR THIS INVESTIGATION HAS DOCUMENTED AT LEAST 25 DRUMS AND NUMEROUS BRAKE FLUID CONTAINERS BURIED ON THE NORTHWEST BOUNDARY OF THE MATTIACE PROPERTY. MOST OF THE DRUMS AND CONTAINERS HAD LEAKED THEIR CONTENTS INTO THE SURROUNDING SOILS. INSTRUMENTATION USED BY FIELD PERSONNEL TO EVALUATE THE NATURE OF THE DRUMS' CONTENTS SUGGESTED THAT THE LEAKING SUBSTANCES WERE VOLATILE AND ORGANIC IN NATURE. LOCALIZED EXPLOSIVE ATMOSPHERES WERE ALSO DOCUMENTED IN AND AROUND SEVERAL OF THE DRUMS THROUGH THE USE OF AN EXPLOSIMETER. THE RESULTS OF LABORATORY ANALYSES CONFIRMED THAT THE LEAKING WASTES ARE HIGHLY CONCENTRATED AND ARE HAZARDOUS SUBSTANCES. BASED ON THE GROUNDWATER INVESTIGATION BEING CONDUCTED AS PART OF THE OVERALL SITE INVESTIGATION, EPA CONCLUDES THAT THE LEAKAGE FROM THESE DRUMS, CONTAINERS, AND STAINED SOILS IS SUBSTANTIALLY CONTAMINATING THE WATER TABLE BENEATH THE SITE. THIS CONTAMINATED GROUNDWATER POSES AN IMMEDIATE THREAT TO BOTH THE ECOLOGY OF HEMPSTEAD HARBOR AND GLEN COVE CREEK. ALSO, CERTAIN PRESENT AND FUTURE PUBLIC HEALTH EXPOSURE SCENARIOS, SUCH AS MIGRATION OF SUBSURFACE VAPORS TO HUMAN RECEPTORS (PARTICULARLY WITHIN NEARBY BUILDINGS), FUTURE DOWNGRAIDENT WELL INSTALLATIONS, AND EXCAVATION AND DEVELOPMENT OF THE MATTIACE PROPERTY FOR POSSIBLE RESIDENTIAL OR COMMERCIAL USE, COULD RESULT IN HEALTH RISKS

TO THE EXPOSED POPULATION. THEREFORE, BOTH A POTENTIAL EXPLOSION HAZARD (ALTHOUGH PRESENTLY MITIGATED BY A SOIL COVER) AND A CHEMICAL HAZARD TO PUBLIC HEALTH AND THE ENVIRONMENT HAVE BEEN DOCUMENTED DURING THIS INVESTIGATION.

THIS QUALITATIVE ANALYSIS OF RISKS WAS APPROPRIATE FOR THIS OPERABLE UNIT DUE TO ITS LIMITED SCOPE, AND IT ENABLED EPA TO DETERMINE THAT ACTUAL OR THREATENED RELEASES OF HAZARDOUS SUBSTANCES FROM THIS SITE, IF NOT ADDRESSED BY IMPLEMENTING THE RESPONSE ACTION SELECTED IN THIS ROD, MAY PRESENT AN IMMINENT AND SUBSTANTIAL ENDANGERMENT TO PUBLIC HEALTH, WELFARE, OR THE ENVIRONMENT.

THE OVERALL QUANTITATIVE RISKS TO PUBLIC HEALTH AND THE ENVIRONMENT FROM THE SITE WILL BE EVALUATED IN DETAIL AS PART OF THE COMPREHENSIVE SITE RI REPORT WHICH EPA WILL ISSUE EARLY NEXT YEAR.

THE FFS, IN WHICH REMEDIAL ALTERNATIVES ARE DEVELOPED, SCREENED, AND THEN CAREFULLY EVALUATED IN DETAIL, FORMS THE BASIS FOR THE SELECTED REMEDY.

#### #DA

#### DESCRIPTION OF ALTERNATIVES

THE FFS ALTERNATIVES DEVELOPED FOR THIS SECOND OPERABLE UNIT ARE BASED ON THE FOLLOWING REMEDIAL RESPONSE OBJECTIVES:

- 1) ELIMINATE THE THREAT OF FIRE OR EXPLOSION ASSOCIATED WITH THE BURIED HAZARDOUS DRUMS AND CONTAINERS; AND
- 2) ENSURE PROTECTION OF PUBLIC HEALTH AND THE ENVIRONMENT BY ELIMINATING A CONCENTRATED AND TOXIC SOURCE OF GROUNDWATER CONTAMINATION.

A "NO ACTION" ALTERNATIVE WAS EVALUATED IN THE FFS, AS REQUIRED BY REGULATION, IN ORDER TO DEVELOP A BASELINE EVALUATION OF RISK AS WELL AS TO PROVIDE AN APPROPRIATE ALTERNATIVE IN THE EVENT THAT NO CONTRAVENTION OF STANDARDS NOR SIGNIFICANT HEALTH OR ENVIRONMENTAL RISKS WERE IDENTIFIED AS A RESULT OF THE DRUMS AND CONTAINERS BEING BURIED AT THE SITE.

THE ALTERNATIVES PRESENTED BELOW ARE THOSE WHICH WERE EVALUATED IN DETAIL FOLLOWING THE PRELIMINARY SCREENING OF ALTERNATIVES. THE PRELIMINARY SCREENING STEP TYPICALLY REMOVES ALTERNATIVES FROM FURTHER CONSIDERATION BASED ON THE GENERAL CRITERIA OF EFFECTIVENESS, IMPLEMENTABILITY, AND COST. SCREENED OUT ALTERNATIVES INCLUDED CONSTRUCTION OF A SLURRY WALL/CAP, BECAUSE IT WOULD NOT PROVIDE A PERMANENT REMEDY, ITS EFFECTIVENESS AGAINST HIGH CONCENTRATIONS OF VOLATILE ORGANIC COMPOUNDS, IN PARTICULAR, IS QUESTIONABLE, AND IT WOULD NOT ALLOW FOR FUTURE DEVELOPMENT OF THE SITE; AND EXCAVATION AND ON-SITE INCINERATION, SINCE IT WAS NOT CONSIDERED ECONOMICALLY FEASIBLE FOR THE RELATIVELY SMALL VOLUME OF HAZARDOUS SUBSTANCES THAT WOULD REQUIRE TREATMENT.

THE REMAINING ALTERNATIVES WHICH ARE LISTED AND DESCRIBED BELOW, HAVE RETAINED THEIR PRE-SCREENING ALPHANUMERICAL DESIGNATIONS IN ORDER TO CORRESPOND WITH THE DESCRIPTIONS OF ALTERNATIVES CONTAINED IN THE FFS REPORT.

PROVIDED BELOW IS A DESCRIPTION, INCLUDING COST AND SCHEDULE INFORMATION, FOR EACH ALTERNATIVE THAT WAS EVALUATED IN DETAIL. THE PRESENT WORTH COSTS ARE ESTIMATES WHICH TAKE INTO ACCOUNT BOTH THE CAPITAL COST AND THE OPERATION AND MAINTENANCE ("O AND M") COSTS FOR 30 YEARS.

#### ALTERNATIVE 1

##### NO ACTION

COST: \$0  
PRESENT WORTH COST: \$0  
TIME TO IMPLEMENT: IMMEDIATE

THIS ALTERNATIVE IS REQUIRED BY REGULATION TO PROVIDE BOTH A BASELINE EVALUATION OF SITE RISK AND AN APPROPRIATE ALTERNATIVE IN THE EVENT THAT RISKS ARE FOUND TO BE ACCEPTABLE AND THERE IS NO CONTRAVENTION OF APPLICABLE OR RELEVANT AND APPROPRIATE STANDARDS.

THE NO ACTION ALTERNATIVE WOULD INVOLVE LEAVING THE DRUMS, CONTAINERS, AND HIGHLY CONTAMINATED SOILS IN THE GROUND ALONG THE NORTHWEST BORDER OF THE MATTIACE PROPERTY. THE TIME TO IMPLEMENT THIS ALTERNATIVE IS CONSIDERED IMMEDIATE.

#### ALTERNATIVE 4

EXCAVATION, BULKING/OVERPACKING, AND OFF-SITE DISPOSAL

COST: \$355,000

PRESENT WORTH COST: \$355,000

TIME TO IMPLEMENT: WITHIN 1 YEAR

ALTERNATIVE 4 WOULD INVOLVE EXCAVATION ALONG THE NORTHWEST BOUNDARY OF THE MATTIACE PROPERTY IN THE AREA WHERE THE DRUMS' AND CONTAINERS' LOCATIONS HAVE BEEN RECORDED AS A RESULT OF THE TEST TRENCHES AND TEST PITS THAT WERE DUG AS PART OF THE SECOND OPERABLE UNIT INVESTIGATION. THE EXCAVATION WOULD INVOLVE REMOVAL OF ALL DRUMS, CONTAINERS, AND HIGHLY CONTAMINATED SOILS. THE EXCAVATION OF THE AREA WOULD BE COMPREHENSIVE IN ORDER TO ENSURE THAT ALL BURIED DRUMS AND CONTAINERS WERE LOCATED AND REMOVED. ANY RESIDUAL SOIL CONTAMINATION WOULD BE DEALT WITH, AS NECESSARY, DURING THE FIRST OPERABLE UNIT REMEDIATION.

ONCE REMOVED, THE DRUMS, CONTAINERS, AND SOILS WOULD BE PREPARED FOR SHIPMENT OFF-SITE THROUGH BULKING AND/OR OVERPACKING AS NECESSARY. THE EXCAVATED MATERIALS WOULD THEN BE TRANSPORTED TO AN OFF-SITE PERMITTED HAZARDOUS WASTE TREATMENT AND DISPOSAL FACILITY. EPA ESTIMATES THAT APPROXIMATELY 50 DRUMS OF HAZARDOUS WASTES AND HIGHLY CONTAMINATED SOILS, AS WELL AS AN INDEFINITE NUMBER OF BRAKE FLUID CONTAINERS, WOULD BE PREPARED FOR TRANSPORTATION TO THE OFF-SITE TREATMENT AND DISPOSAL FACILITY.

ALTERNATIVE 4 WOULD INCLUDE CONTRACTOR MOBILIZATION, EXCAVATION AND ADDITIONAL SAMPLING, WASTE BULKING AND CONTAINERIZATION, AND REMOVAL OF THE MATERIALS OFF-SITE. EPA ESTIMATES THAT ALTERNATIVE 4 COULD BE IMPLEMENTED WITHIN ONE YEAR.

#### #SCAA

##### SUMMARY OF COMPARATIVE ANALYSIS OF ALTERNATIVES

THE SELECTED REMEDY FOR THE SITE IS THE EXCAVATION OF BURIED DRUMS AND CONTAINERS, EXCAVATION OF HIGHLY CONTAMINATED SURROUNDING SOILS, BULKING AND/OR OVERPACKING OF THE EXCAVATED MATERIALS, AND SHIPMENT OF THE BULKED AND/OR OVERPACKED MATERIALS TO A PERMITTED OFF-SITE TREATMENT AND DISPOSAL FACILITY. BASED ON CURRENT INFORMATION, THIS ALTERNATIVE PROVIDES THE BEST BALANCE AMONG THE NINE CRITERIA THAT EPA USES AS A MEANS OF EVALUATING REMEDIAL ACTIONS.

THIS SECTION PROVIDES A GLOSSARY OF THE NINE CRITERIA AND AN ANALYSIS, WITH RESPECT TO THESE CRITERIA, OF THE ALTERNATIVES UNDER CONSIDERATION FOR REMEDIATION OF THE SITE.

#### GLOSSARY OF EVALUATION CRITERIA

OVERALL PROTECTION OF HUMAN HEALTH AND THE ENVIRONMENT ADDRESSES WHETHER OR NOT A REMEDY PROVIDES ADEQUATE PROTECTION AND DESCRIBES HOW RISKS ARE ELIMINATED, REDUCED OR CONTROLLED THROUGH TREATMENT, ENGINEERING CONTROLS, OR INSTITUTIONAL CONTROLS.

COMPLIANCE WITH ARARS ADDRESSES WHETHER OR NOT A REMEDY WILL MEET ALL OF THE APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS (ARARS) AND/OR PROVIDE GROUNDS FOR INVOKING A WAIVER OF ARARS.

SHORT-TERM EFFECTIVENESS INVOLVES THE PERIOD OF TIME NEEDED TO ACHIEVE PROTECTION AGAINST ANY ADVERSE IMPACTS ON HUMAN HEALTH AND THE ENVIRONMENT THAT MAY BE POSED DURING THE CONSTRUCTION AND IMPLEMENTATION PERIOD OF THE ALTERNATIVE.

LONG-TERM EFFECTIVENESS AND PERMANENCE REFERS TO THE ABILITY OF A REMEDY TO MAINTAIN RELIABLE PROTECTION OF HUMAN HEALTH AND THE ENVIRONMENT OVER TIME ONCE CLEANUP GOALS HAVE BEEN MET. IT ALSO ADDRESSES THE MAGNITUDE AND EFFECTIVENESS OF THE MEASURES THAT MAY BE REQUIRED TO MANAGE THE RISKS POSED BY TREATMENT RESIDUALS AND/OR UNTREATED WASTES.

REDUCTION OF TOXICITY, MOBILITY, OR VOLUME REFERS TO THE ANTICIPATED PERFORMANCE OF THE TREATMENT TECHNOLOGIES WITH RESPECT TO THESE PARAMETERS.

IMPLEMENTABILITY INVOLVES THE TECHNICAL AND ADMINISTRATIVE FEASIBILITY OF A REMEDY, INCLUDING THE AVAILABILITY OF MATERIALS AND SERVICES NEEDED TO IMPLEMENT THE CHOSEN SOLUTION.

COST INVOLVES BOTH CAPITAL AND O AND M COSTS. COST COMPARISONS ARE MADE ON THE BASIS OF PRESENT WORTH VALUES, WHICH HAVE BOTH CAPITAL AND O AND M COSTS FACTORED IN.

STATE ACCEPTANCE INDICATES WHETHER THE STATE CONCURS WITH, OPPOSES, OR HAS NO COMMENT ON THE PREFERRED ALTERNATIVE.

COMMUNITY ACCEPTANCE INDICATES WHETHER THE COMMUNITY CONCURS WITH, OPPOSES, OR HAS NO COMMENT ON THE PREFERRED ALTERNATIVE.

## ANALYSIS

### OVERALL PROTECTION OF HUMAN HEALTH AND THE ENVIRONMENT

ALTERNATIVE 1, WHICH IS NO ACTION, WOULD RESULT IN THE BURIED DRUMS, CONTAINERS AND HIGHLY CONTAMINATED SOILS CONTINUING TO ACT AS A SOURCE OF HAZARDOUS WASTES, FURTHER CONTAMINATING THE SURROUNDING SOILS AND EVENTUALLY THE GROUNDWATER BENEATH THE SITE, WHICH IS ALREADY CONTAMINATED AS A RESULT OF GENERAL SOIL CONTAMINATION AT THE SITE. EPA ESTIMATES THAT THE GROUNDWATER CONTAMINATION FROM THIS SOURCE WOULD BE SUBSTANTIAL IN TERMS OF BOTH CONCENTRATION AND LOADING. THE CONTAMINATED GROUNDWATER WOULD THEN MOST LIKELY DISCHARGE INTO BOTH GLEN COVE CREEK AND HEMPSTEAD HARBOR, BOTH OF WHICH ARE SHORT DISTANCES AWAY. ALSO, BY LEAVING THE DRUMS BURIED AT THE SITE, A SIGNIFICANT RISK OF FIRE AND/OR EXPLOSION AND CHEMICAL TOXICITY COULD THREATEN PUBLIC HEALTH UNDER POTENTIAL FUTURE LAND USE SCENARIOS.

ALTERNATIVE 4, IN WHICH THE DRUMS, CONTAINERS, AND HIGHLY CONTAMINATED SOILS ARE EXCAVATED, TREATED AND DISPOSED OF OFF-SITE, WOULD RESULT IN THE COMPLETE REMOVAL OF THE DRUMMED HAZARDOUS SUBSTANCES. ALTHOUGH SOME RISKS WOULD BE POSED TO SITE WORKERS DURING EXCAVATION AND HAZARDOUS WASTE HANDLING, THESE RISKS COULD BE EASILY MITIGATED THROUGH IMPLEMENTATION OF APPROPRIATE HEALTH AND SAFETY PRECAUTIONS.

### COMPLIANCE WITH ARARS

ALTERNATIVE 4 WOULD BE DESIGNED AND IMPLEMENTED TO COMPLY WITH ALL ACTION-SPECIFIC ARARS SINCE THE SOURCE OF THE CONTAMINATION WOULD BE REMOVED AND THE THREAT TO HUMAN HEALTH AND THE ENVIRONMENT FROM THIS PARTICULAR SOURCE WOULD BE ELIMINATED. THERE ARE NO APPLICABLE FEDERAL OR STATE REGULATIONS THAT CAN BE UTILIZED TO SPECIFY NUMERICAL ARARS, OR CLEANUP LEVELS, FOR CONTAMINANTS IN SOILS AT THE SITE. THE TRANSPORTATION TO AND TREATMENT OF WASTES AT AN OFF-SITE FACILITY WOULD BE ACCOMPLISHED IN ACCORDANCE WITH STATE AND FEDERAL HAZARDOUS WASTE MANAGEMENT REQUIREMENTS. THE OFF-SITE FACILITY WOULD BE FULLY RCRA PERMITTED AND, THEREFORE, WOULD MEET APPLICABLE REGULATIONS. THE OVERPACKED DRUMS AND HIGHLY CONTAMINATED SOILS WOULD BE TREATED USING SPECIFIC TECHNOLOGIES OR SPECIFIC TREATMENT LEVELS, AS APPROPRIATE. LAND DISPOSAL RESTRICTIONS ARE NOT CONSIDERED ARARS FOR THE IMPLEMENTATION OF EITHER ALTERNATIVE 1 OR ALTERNATIVE 4.

ARARS PERTINENT TO AIR QUALITY STANDARDS WOULD NOT BE CONTRAVENED BY IMPLEMENTING ALTERNATIVE 4.

ALTERNATIVE 1 IS ANTICIPATED TO LEAD TO CONTRAVENTION OF NEW YORK STATE GROUNDWATER QUALITY STANDARDS, AS WELL AS POSSIBLE CONTRAVENTION OF STATE SURFACE WATER STANDARDS IN GLEN COVE CREEK AND HEMPSTEAD HARBOR.

### SHORT TERM EFFECTIVENESS

ALTERNATIVE 1, WHICH INVOLVES LEAVING THE DRUMS, CONTAINERS, AND ASSOCIATED CONTAMINATED SOILS BURIED ON-SITE, WOULD PROVIDE NO SHORT TERM EFFECTIVENESS. IT WOULD TAKE NO TIME TO IMPLEMENT AND WOULD POSE NO SHORT-TERM RISKS DUE TO ITS IMPLEMENTATION SINCE NO ACTIONS WOULD BE UNDERTAKEN.

ALTERNATIVE 4 WOULD BE IMPLEMENTED WITHIN 1 YEAR AND WOULD EFFECTIVELY ATTAIN THE REMEDIAL RESPONSE OBJECTIVES AFTER THAT PERIOD OF TIME. ALTERNATIVE 4 MAY ALSO HAVE SHORT-TERM IMPACTS ASSOCIATED WITH THE EXCAVATION AND ON-SITE HANDLING OF HAZARDOUS SUBSTANCES. THESE IMPACTS COULD BE MITIGATED THROUGH THE USE OF PROPER CONSTRUCTION TECHNIQUES, AS WELL AS THE IMPLEMENTATION OF AN APPROPRIATE HEALTH AND SAFETY PLAN. TRANSPORTATION OF THE PROPERLY CONTAINERIZED HAZARDOUS MATERIALS IS EXPECTED TO POSE A NEGLIGIBLE RISK TO PUBLIC SAFETY.

#### LONG TERM EFFECTIVENESS AND PERMANENCE

ALTERNATIVE 1 WOULD RESULT IN THE LONG TERM DETERIORATION OF THE UPPER GLACIAL AQUIFER IN THE VICINITY OF THE SITE. THERE MAY ALSO BE SIGNIFICANT DETERIORATION OF SURFACE WATER QUALITY IN GLEN COVE CREEK AND HEMPSTEAD HARBOR. THE POTENTIAL PUBLIC HEALTH RISKS ASSOCIATED WITH CERTAIN FUTURE LAND USE SCENARIOS WOULD CONTINUE INDEFINITELY UNDER THIS ALTERNATIVE.

ALTERNATIVE 4 WOULD PROVIDE BOTH LONG-TERM EFFECTIVENESS AND PERMANENCE BY REMOVING THE DRUMMED HAZARDOUS SUBSTANCES AND SURROUNDING HIGHLY CONTAMINATED SOILS FROM THE SITE, THEREBY ELIMINATING THE POTENTIAL THREAT OF FIRE AND EXPLOSION AND THE CHEMICAL TOXICITY THREAT TO HUMAN HEALTH AND THE ENVIRONMENT BY WAY OF THE VARIOUS EXPOSURE PATHWAYS DISCUSSED UNDER SUMMARY OF SITE RISKS. ANY RESIDUAL SOIL CONTAMINATION WOULD BE DEALT WITH, AS NECESSARY, DURING THE FIRST OPERABLE UNIT REMEDIATION.

#### REDUCTION OF TOXICITY, MOBILITY, OR VOLUME

ALTERNATIVE 1 WOULD NOT AFFECT THE TOXICITY, MOBILITY, OR VOLUME OF THE HAZARDOUS DRUMMED SUBSTANCES AND HIGHLY CONTAMINATED SOILS.

ALTERNATIVE 4 WOULD VIRTUALLY ELIMINATE THE TOXICITY AND MOBILITY OF THE HAZARDOUS DRUMMED SUBSTANCES AND HIGHLY CONTAMINATED SOILS, AND IT WOULD ALSO SIGNIFICANTLY REDUCE THE VOLUME OF THE WASTES BY TREATMENT, THEREBY ELIMINATING A PRINCIPAL THREAT OF CONTAMINATION AT THE SITE.

#### IMPLEMENTABILITY

BOTH ALTERNATIVES ARE CONSIDERED EASILY IMPLEMENTABLE, ALTHOUGH THE NO ACTION ALTERNATIVE WOULD OBVIOUSLY REQUIRE NO MATERIALS, EQUIPMENT OR LABOR.

#### COST

ALTERNATIVE 1, NO ACTION, HAS NO COST ASSOCIATED WITH DESIGN OR CONSTRUCTION.

ALTERNATIVE 4 HAS NO COST ASSOCIATED WITH DESIGN. CONSTRUCTION (EXCAVATION, ON-SITE WASTE HANDLING, AND OFF-SITE TRANSPORTATION/TREATMENT/ DISPOSAL) IS ESTIMATED TO COST \$355,000. SEE TABLE 2 FOR DETAILED COSTS ASSOCIATED WITH ALTERNATIVE 4.

#### STATE AND COMMUNITY ACCEPTANCE

THE PROPOSED PLAN (ALTERNATIVE 4), WHICH WAS RELEASED ON JULY 26, 1990, WAS ACCEPTABLE TO THE NYSDEC AND THE COMMUNITY AS A WHOLE, SINCE IT RECOMMENDS EARLY ACTION TO ADDRESS A SOURCE OF HIGHLY CONCENTRATED HAZARDOUS SUBSTANCES AND WOULD ELIMINATE THE ASSOCIATED THREAT TO HUMAN HEALTH AND THE ENVIRONMENT.

#### #SR

#### SELECTED REMEDY

EPA BELIEVES THAT ALTERNATIVE 4 REPRESENTS THE BEST BALANCE AMONG THE EVALUATION CRITERIA USED TO EVALUATE REMEDIES. COST ESTIMATES ASSOCIATED WITH THE SELECTED REMEDY ARE:



CAPITAL COST: \$355,000  
PRESENT WORTH COST: \$355,000

SPECIFICALLY, THE SELECTED REMEDY WILL INVOLVE THE FOLLOWING ACTIONS:

BASED ON THE DOCUMENTATION OF DRUM LOCATIONS PROVIDED IN THE FFS, AN APPROPRIATE EXCAVATION TECHNIQUE WILL BE EMPLOYED TO UNEARTH ALL DRUMS AND OTHER CONTAINERS IN AREA 1 AND TEMPORARILY STAGE EXCAVATED MATERIALS ON AN IMPERMEABLE PAD WHICH CONTAINS BERMING TO PREVENT RUNOFF. SOILS JUDGED TO BE HIGHLY CONTAMINATED BY EPA WILL ALSO BE REMOVED AND SIMILARLY STAGED.

AFTER ALL HIGHLY CONTAMINATED SOILS ARE EXCAVATED, AN APPROPRIATE GEOPHYSICAL METHOD WILL THEN BE EMPLOYED TO CONFIRM THAT ALL METAL IN AREA 1 HAS EITHER BEEN ACCOUNTED FOR OR REMOVED. SIMILARLY, SOIL SAMPLES WILL BE TAKEN FROM THE EXCAVATED AREA FOLLOWING DRUM AND CONTAMINATED SOIL REMOVAL PRIOR TO REFILLING THE EXCAVATED AREA. CLEAN FILL WILL THEN BE USED AS NECESSARY TO REFILL THE EXCAVATION. EPA PRESENTLY ESTIMATES THAT A MINIMUM OF FIFTY (50) DRUMS OF HAZARDOUS LIQUIDS, SLUDGES, AND CONTAMINATED SOILS WILL BE GENERATED AS A RESULT OF THIS REMEDY.

SOIL SAMPLES WILL ALSO BE COLLECTED AT TEST PITS TP-05 THROUGH TP-08 THROUGH THE USE OF HAND AUGERING OR AN EQUIVALENT TECHNIQUE, IN ORDER TO SUPPLEMENT PREVIOUS INCONCLUSIVE SAMPLING AND TO CONFIRM THE FIELD INVESTIGATION CONCLUSION THAT NO HAZARDOUS SUBSTANCES ARE PRESENT AT THESE LOCATIONS.

EXCAVATED HAZARDOUS SUBSTANCES FROM AREA 1 WILL THEN BE SAMPLED AND SUBSEQUENTLY EVALUATED FOR THE POSSIBLE BULKING OF COMPATIBLE SUBSTANCES, FOLLOWED BY CONTAINERIZATION OF BULKED WASTES AND OVERPACKING OF DRUMS AS NEEDED. THE PROPERLY CONTAINERIZED MATERIALS WILL THEN BE TRANSPORTED OFF-SITE TO AN EPA-APPROVED HAZARDOUS WASTE FACILITY FOR TREATMENT AND DISPOSAL. FOR THE PURPOSE OF ESTIMATING THE COST OF THE SELECTED REMEDY, OFF-SITE INCINERATION WAS CHOSEN AS AN APPROPRIATE TREATMENT ALTERNATIVE. THE ACTUAL TREATMENT TECHNOLOGY TO BE EMPLOYED WILL BE SELECTED BY THE OFF-SITE TREATMENT AND DISPOSAL FACILITY, BASED ON EVALUATION OF THE TYPE OF HAZARDOUS SUBSTANCES AND THE APPLICABLE DISPOSAL STANDARDS.

THE TRANSPORTATION OF THE HAZARDOUS SUBSTANCES WILL BE IN ACCORDANCE WITH ALL FEDERAL AND STATE HAZARDOUS WASTE TRANSPORTATION REQUIREMENTS.

FURTHER CHARACTERIZATION OF THE UNSATURATED ZONE SOILS AT THE SITE, INCLUDING AN EVALUATION OF POSSIBLE REMEDIAL ALTERNATIVES, WILL BE PERFORMED AS PART OF THE ONGOING FIRST OPERABLE UNIT RI/FS. ALSO, POST REMEDIAL MONITORING OF THE SITE, INCLUDING THE DRUM BURIAL AREA ADDRESSED IN THE SECOND OPERABLE UNIT, WILL BE ADDRESSED AS PART OF THE COMPREHENSIVE SITE REMEDY TO BE PROPOSED BY EPA AT THE CONCLUSION OF THE FIRST OPERABLE UNIT FS, WHICH IS PRESENTLY SCHEDULED FOR FEBRUARY, 1990.

#SD

#### STATUTORY DETERMINATIONS

UNDER ITS LEGAL AUTHORITIES, EPA'S PRIMARY RESPONSIBILITY AT SUPERFUND SITES IS TO UNDERTAKE REMEDIAL ACTIONS THAT ACHIEVE PROTECTION OF HUMAN HEALTH AND THE ENVIRONMENT. IN ADDITION, SECTION 121 OF CERCLA ESTABLISHES SEVERAL OTHER STATUTORY REQUIREMENTS AND PREFERENCES. THESE SPECIFY THAT, WHEN COMPLETE, THE SELECTED REMEDIAL ACTION FOR A SITE MUST COMPLY WITH APPLICABLE OR RELEVANT AND APPROPRIATE ENVIRONMENTAL STANDARDS ESTABLISHED UNDER FEDERAL AND STATE ENVIRONMENTAL LAWS UNLESS A STATUTORY WAIVER IS JUSTIFIED. A SELECTED REMEDY ALSO MUST BE COST EFFECTIVE AND UTILIZE PERMANENT SOLUTIONS AND ALTERNATIVE TREATMENT TECHNOLOGIES OR RESOURCE RECOVERY TECHNOLOGIES TO THE MAXIMUM EXTENT PRACTICABLE. FINALLY, THE STATUTE INCLUDES A PREFERENCE FOR REMEDIES THAT EMPLOY TREATMENT THAT PERMANENTLY AND SIGNIFICANTLY REDUCE THE VOLUME, TOXICITY, OR MOBILITY OF HAZARDOUS WASTES AS THEIR PRINCIPAL ELEMENT.

#### PROTECTION OF HUMAN HEALTH AND THE ENVIRONMENT

THE SELECTED REMEDY, IN WHICH THE DRUMS, CONTAINERS, AND HIGHLY CONTAMINATED SOILS ARE EXCAVATED, TREATED AND DISPOSED OF OFF-SITE, WILL RESULT IN THE COMPLETE REMOVAL OF THE DRUMMED HAZARDOUS SUBSTANCES. ALTHOUGH SOME RISKS MAY BE POSED TO SITE WORKERS DURING EXCAVATION AND HAZARDOUS WASTE HANDLING, THESE RISKS COULD BE EASILY MITIGATED THROUGH IMPLEMENTATION OF APPROPRIATE HEALTH AND SAFETY PRECAUTIONS.

## COMPLIANCE WITH APPLICABLE OR APPROPRIATE AND RELEVANT STANDARDS

THE SELECTED REMEDY IS EXPECTED TO COMPLY WITH ALL APPLICABLE OR RELEVANT AND APPROPRIATE STATE AND FEDERAL REQUIREMENTS. ALL EPA AND US DEPARTMENT OF TRANSPORTATION REGULATIONS GOVERNING THE OFF-SITE TRANSPORTATION AND DISPOSAL OF HAZARDOUS WASTES WILL BE OBSERVED. FEDERAL OSHA STANDARDS WILL ALSO BE COMPLIED WITH DURING CONSTRUCTION.

## COST EFFECTIVENESS

THE SELECTED REMEDY IS COST EFFECTIVE BECAUSE IT HAS BEEN DETERMINED TO PROVIDE OVERALL EFFECTIVENESS PROPORTIONAL TO ITS COSTS (PRESENT WORTH = \$355,000).

UTILIZATION OF PERMANENT SOLUTIONS AND ALTERNATIVE TREATMENT TECHNOLOGIES (OR RESOURCE RECOVERY TECHNOLOGIES) TO THE MAXIMUM EXTENT PRACTICABLE AND PREFERENCE FOR TREATMENT AS A PRINCIPAL ELEMENT

THE EXCAVATION AND OFF-SITE TREATMENT AND DISPOSAL OF THE CONTAMINANTS AT AN APPROVED RCRA FACILITY SATISFIES THE STATUTORY PREFERENCE OF CERCLA FOR UTILIZING PERMANENT SOLUTIONS AND ALTERNATIVE TREATMENT TECHNOLOGIES TO THE MAXIMUM EXTENT PRACTICABLE. THE SELECTED REMEDY WILL ALSO PERMANENTLY AND SIGNIFICANTLY REDUCE THE TOXICITY, MOBILITY, AND VOLUME OF HAZARDOUS SUBSTANCES IN THE SOILS AT THE SITE, THEREBY ELIMINATING A PRINCIPAL THREAT OF CONTAMINATION AT THE SITE.

## #DSC

### DOCUMENTATION OF SIGNIFICANT CHANGES

THE PROPOSED PLAN FOR THE SITE WAS RELEASED TO THE PUBLIC IN JULY 1990. THE PROPOSED PLAN IDENTIFIED ALTERNATIVE 4 AS THE PREFERRED ALTERNATIVE TO REMEDIATE THE SOURCE OF CONTAMINATION. EPA REVIEWED ALL COMMENTS SUBMITTED DURING THE PUBLIC COMMENT PERIOD. UPON REVIEW OF THESE COMMENTS, IT WAS DETERMINED THAT NO SIGNIFICANT CHANGES TO THE SELECTED REMEDY, AS IT WAS ORIGINALLY IDENTIFIED IN THE PROPOSED PLAN, WERE NECESSARY.

## #RS

### RESPONSIVENESS SUMMARY

THE US ENVIRONMENTAL PROTECTION AGENCY (EPA) SCHEDULED A PUBLIC COMMENT PERIOD FROM JULY 27, 1990 THROUGH AUGUST 27, 1990 FOR INTERESTED PARTIES TO COMMENT ON EPA'S FINAL FOCUSED FEASIBILITY STUDY (FFS) AND PROPOSED PLAN FOR THE SECOND OPERABLE UNIT AT THE MATTIACE PETROCHEMICAL CO., INC. SITE. EPA HELD A PUBLIC MEETING ON AUGUST 14, 1990 AT THE GLEN COVE CITY HALL, LOCATED ON BRIDGE STREET, GLEN COVE, N.Y. TO DESCRIBE THE REMEDIAL ALTERNATIVES AND PRESENT EPA'S PROPOSED PLAN FOR ADDRESSING THE SECOND OPERABLE UNIT OBJECTIVES AT THE SITE.

A TRANSCRIPT OF THE MEETING IS PART OF THE ADMINISTRATIVE RECORD FOR THE SITE AND DOCUMENTS THOSE QUESTIONS ADDRESSED AT THE PUBLIC MEETING. OTHER COMMENTS RECEIVED DURING THE COMMENT PERIOD, AS WELL AS THOSE COMMENTS MADE DURING THE PUBLIC MEETING, ARE SUMMARIZED AND RESPONDED TO IN THE RESPONSIVENESS SUMMARY. ALL COMMENTS WERE CONSIDERED PRIOR TO THE SELECTION OF THE REMEDY FOR THE MATTIACE PETROCHEMICAL CO., INC. SITE.

COMMENT: WHAT ARE THE SOIL CLEAN UP LEVELS FOR REMOVAL OF STAINED SOILS FROM THE BURIED DRUM AREA?

RESPONSE: THE SELECTED REMEDY CALLS FOR THE REMOVAL OF HIGHLY CONTAMINATED SOILS. THE JUDGMENT OF EPA'S ON SCENE COORDINATOR, WHO WILL OVERSEE IMPLEMENTATION OF THE SELECTED REMEDY, WILL DETERMINE WHICH SOILS QUALIFY AS HIGHLY CONTAMINATED. EPA BELIEVES THIS APPROACH TO THE DRUM AND CONTAMINATED SOIL REMOVAL CAN BE USED SINCE THE SOIL/DRUM REMOVAL WILL BE FOLLOWED BY SAMPLING OF SOIL REMAINING AT THE EXCAVATION. THE RESULTS OF THESE SAMPLES WILL ALLOW EPA TO DETERMINE WHETHER THE AREA IS NO LONGER A CONTAMINATION THREAT, OR IF ADDITIONAL REMEDIATION OF THIS AREA WILL BE NEEDED AS PART OF THE FIRST OPERABLE UNIT REMEDY. THIS DETERMINATION WILL BE MADE AS PART OF THE FIRST OPERABLE UNIT RISK ASSESSMENT. THE PURPOSE OF THE SECOND OPERABLE UNIT IS TO QUICKLY REMOVE A CONCENTRATED SOURCE OF HAZARDOUS CONTAMINATION NOW KNOWN TO EXIST ON THE MATTIACE PROPERTY AS A RESULT OF THE RECENTLY COMPLETED SECOND OPERABLE UNIT INVESTIGATION.

COMMENT: WHAT ADMINISTRATIVE STEPS ARE REQUIRED PRIOR TO IMPLEMENTATION OF THE SELECTED REMEDY?

RESPONSE: PROJECT FUNDING MUST BE PROCURED, AND A SUPERFUND STATE CONTRACT MUST BE SIGNED WITH NEW YORK STATE PRIOR TO MOBILIZATION TO THE SITE TO IMPLEMENT THE SELECTED REMEDY. THE CONTRACT IS THE ADMINISTRATIVE ACTION WHICH REQUIRES MORE TIME TO PROCESS, AND USUALLY TAKES FOUR TO SIX WEEKS FOR FINAL EXECUTION. THE CONTRACT WILL BEGIN CIRCULATION AT THE TIME OF THE SIGNATURE OF THIS RECORD OF DECISION.

COMMENT: WHAT CRITERIA WAS USED TO DETERMINE THE DEPTHS TO WHICH DRUMS WERE SEARCHED FOR?

RESPONSE: THE DEPTH TO WHICH VARIOUS GEOPHYSICAL INSTRUMENTATION CAN OPERATE DEPENDS ON THE GEOPHYSICAL TECHNOLOGY, AS WELL AS THE PHYSICAL CONDITIONS AT THE SITE. GIVEN THE MATTIACE SITE CONDITIONS, ELECTROMAGNETIC PULSES COULD PENETRATE FURTHER THAN THE GROUND PENETRATING RADAR PULSES. BOTH METHODS WERE USED FOR DETECTING SUBSURFACE ANOMALIES THEORETICALLY AS DEEP AS THE WATER TABLE IN THIS AREA (APPROX. 24 FEET) ALTHOUGH, GENERALLY SPEAKING, THE MORE SHALLOW THE BURIAL, THE MORE LIKELY THE DETECTION.

COMMENT: WHAT IS THE ACTUAL SIZE OF THE SITE? TWO AND ONE HALF ACRES, AS INDICATED IN THE FFS, IS NOT CORRECT.

RESPONSE: BASED ON MEASUREMENTS TAKEN FROM THE SITE MAPS INCORPORATED INTO THE FFS, THE MATTIACE PROPERTY IS APPROXIMATELY TWO AND ONE HALF ACRES.

COMMENT: WHEN WILL THE SITE BE SUFFICIENTLY CLEANED TO ALLOW FOR DEVELOPMENT, AND WHAT TYPE OF DEVELOPMENT?

RESPONSE: IT IS EXPECTED THAT THE SITE WILL BE SUFFICIENTLY CLEANED TO PERMIT DEVELOPMENT AT THE COMPLETION OF THE FIRST OPERABLE UNIT. SINCE A FIRST OPERABLE UNIT REMEDY HAS NOT YET BEEN SELECTED, NO SPECIFIC ESTIMATE FOR COMPREHENSIVE SITE CLEAN-UP IS NOW AVAILABLE. MOREOVER, THE FIRST OPERABLE UNIT PROPOSED PLAN, AND EVENTUALLY THE SELECTED REMEDY (INCLUDING THE POSSIBILITY OF NO ACTION), WILL ADDRESS SUCH ISSUES AS TIME TO IMPLEMENT THE REMEDY AND POSSIBLE LONG TERM RESPONSE ACTIONS. THE FIRST OPERABLE UNIT PROPOSED PLAN IS EXPECTED TO BE RELEASED EARLY IN 1991.

DEVELOPMENT OF THE SITE WILL BE POSSIBLE ONCE THE LONG-TERM RISKS ASSOCIATED WITH SITE OCCUPATION HAVE BEEN MITIGATED, IF NECESSARY, TO ACCEPTABLE LEVELS. THE ASSESSMENT OF THESE LONG-TERM RISKS IS PRESENTLY BEING PERFORMED AS PART OF THE FIRST OPERABLE UNIT RISK ASSESSMENT. THE TYPE OF DEVELOPMENT THAT WILL ULTIMATELY TAKE PLACE WILL BE BASED ON LOCAL ZONING REGULATION.

COMMENT: IS THERE ANY WAY OF HISTORICALLY ASCERTAINING IF OR HOW MUCH HAZARDOUS WASTE WAS DUMPED IN GLEN COVE CREEK?

RESPONSE: THE PURPOSE OF THE FIRST OPERABLE UNIT REMEDIAL INVESTIGATION IS TO DETERMINE THE PRESENT WATER AND SEDIMENT QUALITY IN THAT PORTION OF THE CREEK WHICH THEORETICALLY MAY HAVE BEEN IMPACTED BY EITHER OVERLAND RUNOFF FROM MATTIACE, OR THE MATTIACE STORM DRAINAGE SYSTEM WHICH EMPTIES INTO THE CREEK. THERE ARE HISTORICAL ACCOUNTS FROM THE NASSAU COUNTY DEPARTMENT OF HEALTH IN THIS REGARD WHICH HAVE HELPED EPA IN STRUCTURING THIS PART OF THE INVESTIGATION.

COMMENT: WERE EXISTING WELLS TESTED, AS WELL AS WELLS INSTALLED FOR THIS SITE?

RESPONSE: RESULTS FROM EXISTING WELLS ARE BEING EVALUATED AS WELL AS THE RESULTS FROM WELLS INSTALLED ESPECIALLY FOR THIS SITE BY EPA, AS PART OF THE FIRST OPERABLE UNIT REMEDIAL INVESTIGATION.

COMMENT: IS THERE ANY DANGER TO POTABLE WATER SUPPLIES IN THE AREA?

RESPONSE: BASED ON EPA'S PRESENT KNOWLEDGE OF THE SITE, THERE IS NO INDICATION THAT ANY OF THE CONTAMINANTS RELATED TO THIS SITE ARE EITHER THREATENING OR HAVE IMPACTED ANY EXISTING POTABLE WATER SUPPLIES. BOTH THE DIRECTION OF GROUNDWATER FLOW AND THE SUBSURFACE GEOLOGY IN THE VICINITY OF THE SITE WOULD PREVENT SITE CONTAMINATION FROM REACHING THE POTABLE WATER WELLS PRESENTLY USED BY THE CITY OF GLEN COVE.

COMMENT: COULD NEIGHBORING PROPERTIES BE AFFECTED BY THE SPREAD OF CONTAMINATION?

RESPONSE: THE EXPOSURE PATHWAYS INVOLVING SITE CONTAMINATION WILL BE FULLY ASSESSED AS PART OF THE FIRST OPERABLE UNIT PUBLIC HEALTH AND ENVIRONMENTAL RISK ASSESSMENT. AT THE PRESENT TIME, HOWEVER, EPA FEELS THAT NONE OF THE NEIGHBORING PROPERTIES ARE IN DANGER OF EXPOSURE TO ACUTELY DANGEROUS LEVELS OF HAZARDOUS SUBSTANCES.

COMMENT: IS THE MATTIACE PROPERTY ITSELF DANGEROUS? WHO IS RESPONSIBLE FOR SITE SECURITY?

RESPONSE: EPA HAS DIRECTLY MAINTAINED RESTRICTED ACCESS AT THE MATTIACE SITE SINCE INITIATION OF SITE ACTIVITIES IN 1988. BASED ON AN INITIAL HEALTH ASSESSMENT FOR THE PURPOSE OF DEVELOPING A WORKER HEALTH AND SAFETY PLAN, EPA BELIEVES THAT OTHER THAN INTRUSIVE ACTIVITIES E.G., DRILLING, EXCAVATION ETC., GENERAL ACTIVITIES COULD BE CONDUCTED AT THE MATTIACE SITE IN THE LOWEST LEVEL OF HAZARDOUS WASTE PROTECTION, WHICH APPROXIMATES STREET CLOTHING. HOWEVER, BECAUSE EPA CANNOT CONTROL THE TYPE OF ACTIVITY THAT THE GENERAL PUBLIC MIGHT ENGAGE IN ON THIS PROPERTY, AND BECAUSE THERE MAY BE OTHER ACUTE HAZARDS OF A MECHANICAL NATURE, EPA BELIEVES RESTRICTED SITE ACCESS IS PRUDENT. BECAUSE OF THE BREACH OF SITE SECURITY WHICH OCCURRED AROUND THE TIME OF THE AUGUST 14, 1990 PUBLIC MEETING, EPA HAS INITIATED UPGRADED SECURITY MEASURES, INCLUDING A LOCKING BAR ON THE FRONT GATE, AN EXPLICIT SIGN IDENTIFYING THE PROPERTY AS A SUPERFUND SITE AND WARNING OF DANGER, AND REPAIR OF THE VEHICLE RESTRICTED ACCESS BAR IN THE ROADWAY JUST INSIDE THE GATE. ADDITIONAL SECURITY ADJUSTMENTS WILL BE MADE AS WARRANTED.

COMMENT: WHAT CHEMICALS WERE IN THE DRUMS THAT WERE SAMPLED?

RESPONSE: THE ORGANIC CHEMICALS OF HIGHEST CONCENTRATION WERE 4-METHYL-2-PENTANONE (APPROX. 160,000 PARTS PER MILLION, OR PPM), TOLUENE (APPROX. 220,000 PPM), AND XYLENE (APPROX. 7,300 PPM). CONCENTRATIONS OF HEAVY METALS, PARTICULARLY LEAD, WERE ALSO HIGH IN SOILS FROM SEVERAL TEST PITS SURROUNDING THE DRUMS.

COMMENT: IS THE THREAT OF EXPLOSION A REALISTIC HAZARD AT THIS SITE (FROM THE BURIED DRUMS)?

RESPONSE: ALTHOUGH THE DRUMS, ONCE RE-COVERED BY EARTH, NO LONGER EXHIBIT THE AMBIENT EXPLOSIVE CHARACTERISTICS THAT WERE EVIDENT DURING THE EXCAVATION PART OF THE INVESTIGATION, EPA STILL CONSIDERS THE SITUATION AS POTENTIALLY DANGEROUS, AND PART OF THAT POTENTIAL DANGER INVOLVES EXPLOSION. THIS JUDGMENT, AS IS ANY EPA POLICY REGARDING PUBLIC HEALTH, IS CONSERVATIVE.

COMMENT: WHERE WILL THE EXCAVATED DRUMS BE TAKEN? OUT OF STATE?

RESPONSE: THE DRUMS AND HIGHLY CONTAMINATED SOILS WILL BE TRUCKED TO AN OFF-SITE HAZARDOUS WASTE TREATMENT AND DISPOSAL FACILITY PERMITTED AND IN COMPLIANCE WITH THE REQUIREMENTS OF THE RESOURCE CONSERVATION AND RECOVERY ACT. THERE ARE NO REQUIREMENTS AS TO FACILITY LOCATION, OTHER THAN COST-EFFECTIVENESS CONSIDERATIONS.

#TA

**TABLE 2**  
**COST ANALYSIS**

ALT. 4 EXCAVATION AND BULKING/OVERPACKING OF DRUMS AND OFF-SITE DISPOSAL

A) MOBILIZATION \$ 12,500

B) LABOR (TO INCLUDE: PROGRAM DIRECTOR, PROJECT MANGER, FOREMAN, 3  
LABORERS, FIELD CHEMIST, OPERATOR AND HEALTH AND SAFETY SUPERVISOR)

PROGRAM DIRECTOR:	(40 HRS) X (\$135/HR) =	\$ 5,400
PROJECT MANAGER:	(80 HRS) X (\$90/HR) =	7,200
FOREMAN:	(160 HRS) X (\$76/HR) =	12,160
LABORERS (3):	(160 HRS) X (\$55/HR) =	26,400
FIELD CHEMIST:	(160 HRS) X (\$69/HR) =	11,040
OPERATOR:	(160 HRS) X (\$55/HR) =	8,800
HEALTH & SAFETY:	(160 HRS) X (\$76/HR) =	12,160
		\$ 83,200

C) DEMOBILIZATION \$ 7,500

D) TRAVEL AND PER DIEM \$ 12,000

E) EQUIPMENT (TO INCLUDE: BACKHOE, BOBCAT,  
GENERATOR, PICK-UP TRUCK, POWER WASHER,  
EMERGENCY LIGHTING, DRUM GRAPPLER, BULKING  
CHAMBER, ETC GT) \$ 30,000

F) MATERIAL (TO INCLUDE: FUEL, COMPRESSED  
AIR, OVERPACK DRUMS, WATER, SAMPLE JARS, ETC.) \$ 10,000

G) TRANSPORTATION: (50 OVERPACKED DRUMS \$ 4,500

H) DISPOSAL  
50 DRUMS \$750/DRUM \$ 38,000

I) ANALYTICAL  
50 SAMPLES FOR DISPOSAL ANALYSIS (2) \$ 82,500  
SUBTOTAL \$ 280,200  
15 PERCENT CONTINGENCY \$ 42,100  
TOTAL \$ 322,300

NOTE:

- 1) FOR COST ESTIMATING PURPOSES A WORST CASE SCENARIO OF OVERPACKING EACH DRUM (ASSUMING 50) WAS USED FOR A CONSERVATIVE ESTIMATE. ADDITIONAL DRUMS WOULD BE COSTED OUT AT 3,500 PER DRUM.
- 2) INCLUDES HAZCAT, BTU PERCENT SOLID, PERCENT MOISTURE, ASH CONTENT AND FULL TCLP ANALYSIS (ASSUMING SLUDGE).
- 3) NO ENGINEERS FEES ARE INCLUDED IN ESTIMATE; ASSUME DIRECT IMPLEMENTATION.